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(11) EP 0 652 681 A3

(12) EUROPEAN PATENT APPLICATION

(88) Date of publication A3:  
06.03.1996 Bulletin 1996/10

(51) Int. Cl.<sup>6</sup>: H04Q 7/32

(43) Date of publication A2:  
10.05.1995 Bulletin 1995/19

(21) Application number: 94111233.6

(22) Date of filing: 19.07.1994

(84) Designated Contracting States:  
DE FR GB

(30) Priority: 10.11.1993 JP 281315/93

(71) Applicant: FUJITSU LIMITED  
Kawasaki-shi, Kanagawa 211 (JP)

(72) Inventors:  
• Maruyama, Minoru,  
c/o FUJITSU LIMITED  
Kawasaki-shi, Kanagawa 211 (JP)  
• Kanno, Hiroshi,  
c/o FUJITSU LIMITED  
Kawasaki-shi, Kanagawa 211 (JP)

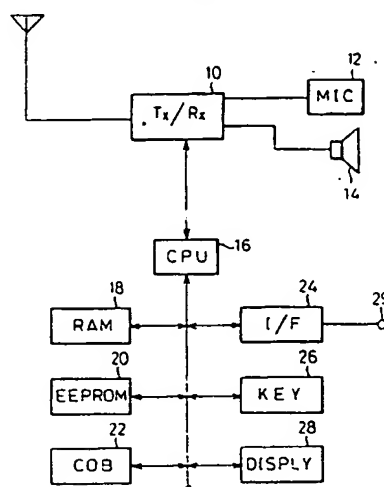
• Fujiwara, Shuuji,  
c/o FUJITSU LIMITED  
Kawasaki-shi, Kanagawa 211 (JP)  
• Watanabe, Kunio,  
c/o FUJITSU LIMITED  
Kawasaki-shi, Kanagawa 211 (JP)

(74) Representative: Lehn, Werner, Dipl.-Ing. et al  
Hoffmann, Eitle & Partner,  
Patentanwälte,  
Arabellastrasse 4  
D-81925 München (DE)

(54) Method of mobile radio unit registration and IC card registration for a mobile radio communication system

(57) To prevent illegal duplication of an ID containing type mobile unit, and illegal duplication of an IC card for an IC card insertion type mobile unit, in manufacturing a COB device, a public key  $KE_{COB}$ , corresponding to a common secret key  $KD_{COB}$  determined through consultation among communications carriers, is stored into a ROM in an unalterable form. In manufacturing a mobile unit,  $KE_{Cj}$  that corresponds to a secret key  $KD_{Cj}$  uniquely assigned to each communications carrier, is signature-encrypted with  $KD_{COB}$ . The result  $E(KD_{COB}, KE_{Cj})$  is entered into a COB device (22) write in  $KE_{Cj}$ ; the COB device (22) is then assembled, prior to shipment, into the mobile unit into which a mobile unit secret key  $KD_{MSNi}$  and public key  $KE_{MSNi}$  have been stored. In registration of the mobile unit,  $E(KD_{Cj}, ID)$  received from the communications carrier is entered into the COB device (22), thereby writing personal information ID. For a readout,  $KD_{MSNi}$  is input to read out the ID.

Fig.1



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## EUROPEAN SEARCH REPORT

Application Number  
EP 94 11 1233

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	US-A-5 249 230 (MIHM, JR.) 28 September 1993 * column 2, line 22 - line 33 * * column 5, line 3 - line 21 * * column 4, line 28 - line 46 * * column 6, line 48 - column 8, line 54 * * column 9, line 65 - column 10, line 24 * ---	1, 14, 25, 35, 39, 40	H04Q7/32
A	WO-A-93 07697 (COMVIK GSM AB) 15 April 1993  * page 3, line 4 - page 4, line 2 * * page 6, line 1 - page 7, line 6 * ---	1, 2, 14, 15, 23-25, 35, 39, 40	
A	US-A-5 077 790 (D'AMICO ET AL.) 31 December 1991 * abstract * ---	13, 34	
E	US-A-5 386 468 (AKIYAMA ET AL.) 31 January 1995 * the whole document *	1-5, 25-28	TECHNICAL FIELDS SEARCHED (Int.Cl.6)
X, P	& JP-A-06 097 931 (FUJITSU LTD) 8 April 1994 ---	1-5, 25-28	H04Q
E	GB-A-2 274 565 (FUJITSU LIMITED) 27 July 1994 * abstract * * claims 1, 2, 6, 8 * -----	1, 25	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 9 January 1996	Examiner Behringer, L.V.
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone  Y : particularly relevant if combined with another document of the same category  A : technological background  O : non-written disclosure  P : intermediate document</p> <p>T : theory or principle underlying the invention  E : earlier patent document, but published on, or after the filing date  D : document cited in the application  L : document cited for other reasons  &amp; : member of the same patent family, corresponding document</p>			